



Verizon Communications  
1300 I Street NW, Suite 400W  
Washington, DC 20005

July 26, 2001

**Ex Parte**

Ms. Magalie Roman Salas  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> St., S.W. – Portals  
Washington, DC 20554

RE: Application by Verizon New York Inc. for Authorization To Provide In-Region,  
InterLATA Services in State of Pennsylvania, Docket No. 01-138

Dear Ms. Salas:

In response to questions raised by the CCB staff, C. Odom, B. Graves, J. Canny, M. Davis, C. Nogay, D. May, J. Pachulski, R. Ellis and K. Zacharia of Verizon met today with R. Tanner, B. Olson, T. Hanbury, P. Shrinivasan, B. Childers and B. Koerner to discuss various issues in the above application. Documents used in this meeting are enclosed. Please let me know if you have any questions. The twenty-page limit does not apply as set forth in DA 01-1486.

Sincerely,

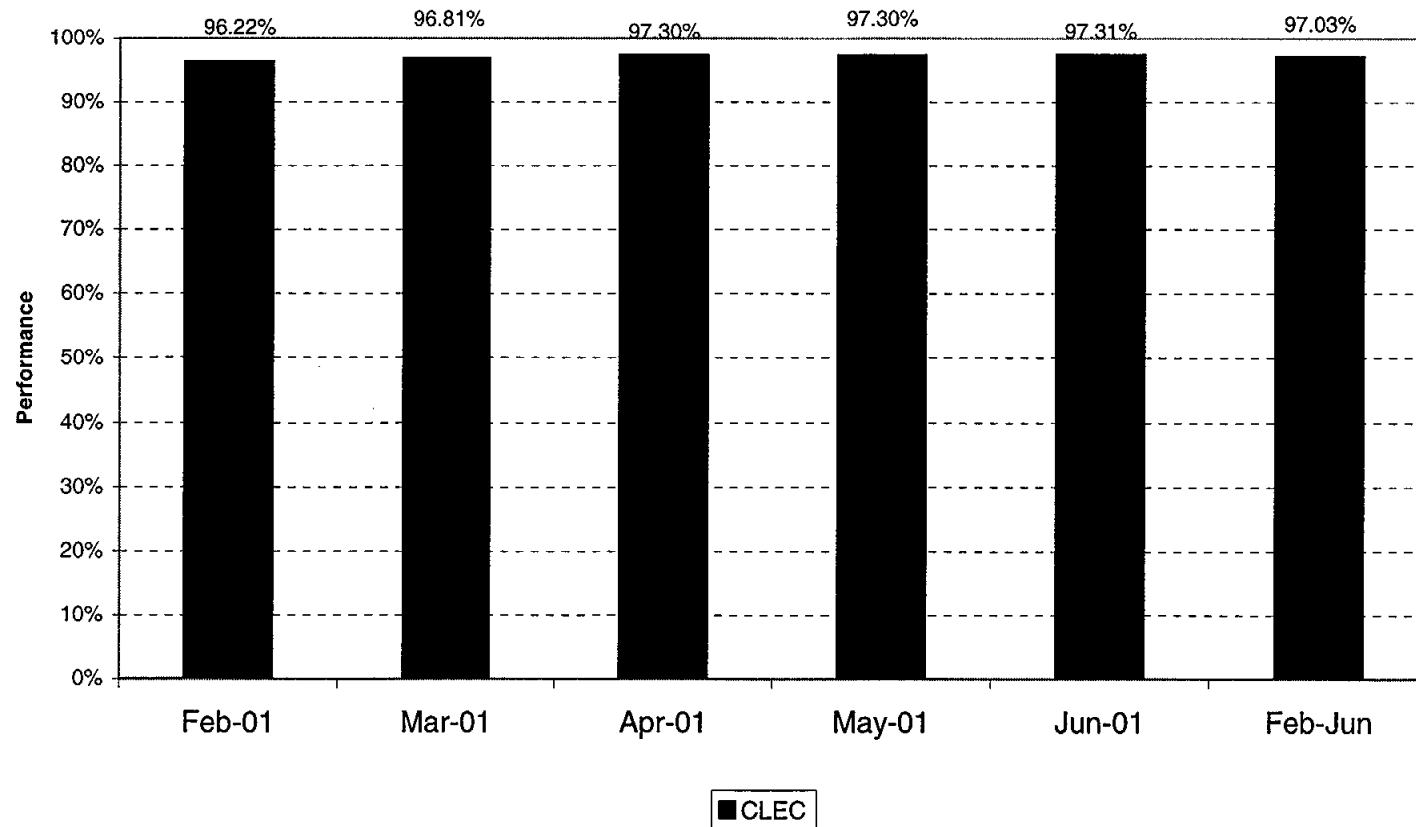
A handwritten signature in cursive script, appearing to read "Clint E. Odom".

Clint E. Odom

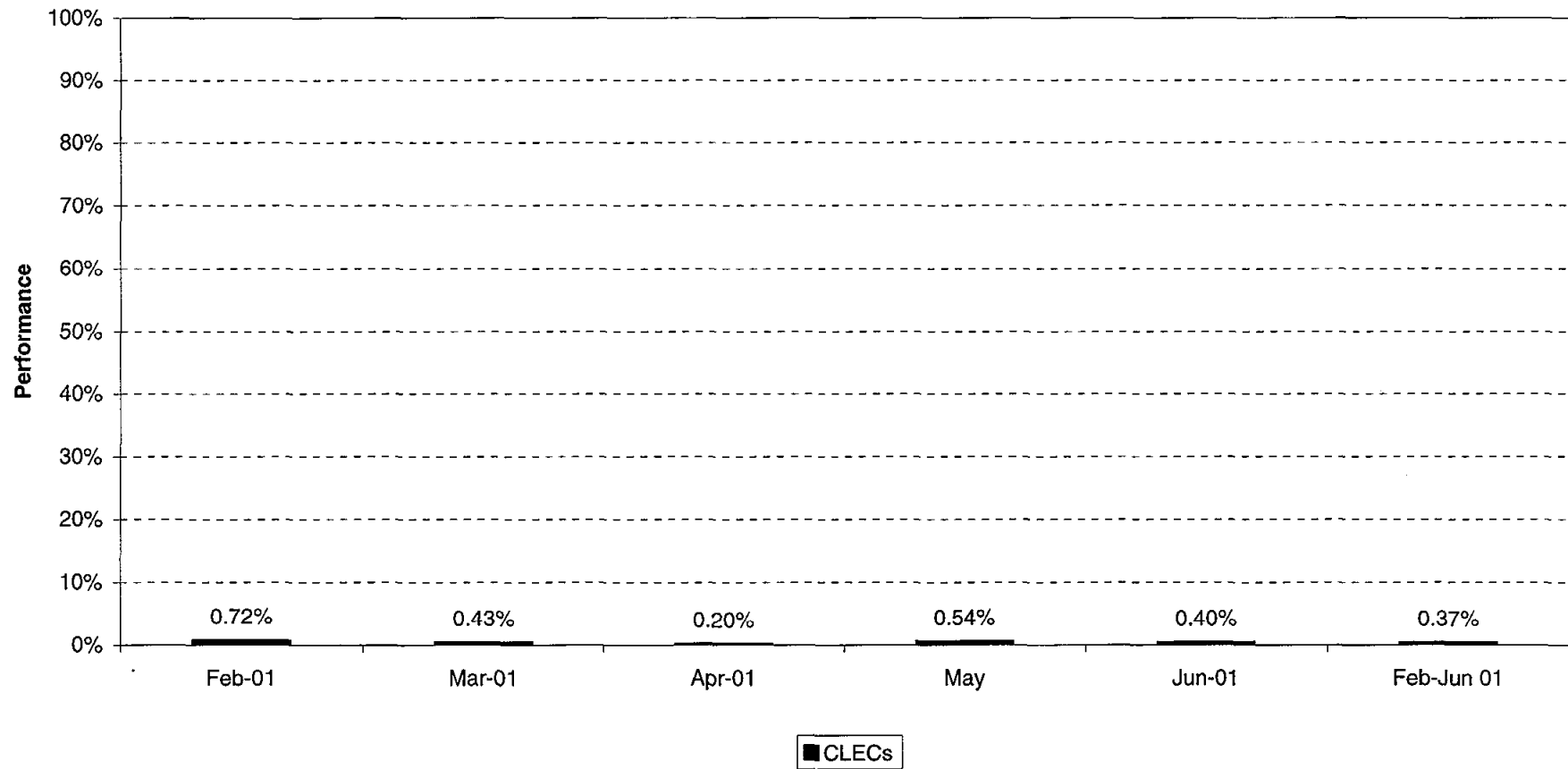
Enclosures

cc: R. Tanner  
B. Koerner  
T. Hanbury  
B. Childers  
B. Olson  
P. Shrinivasan  
S. Pie

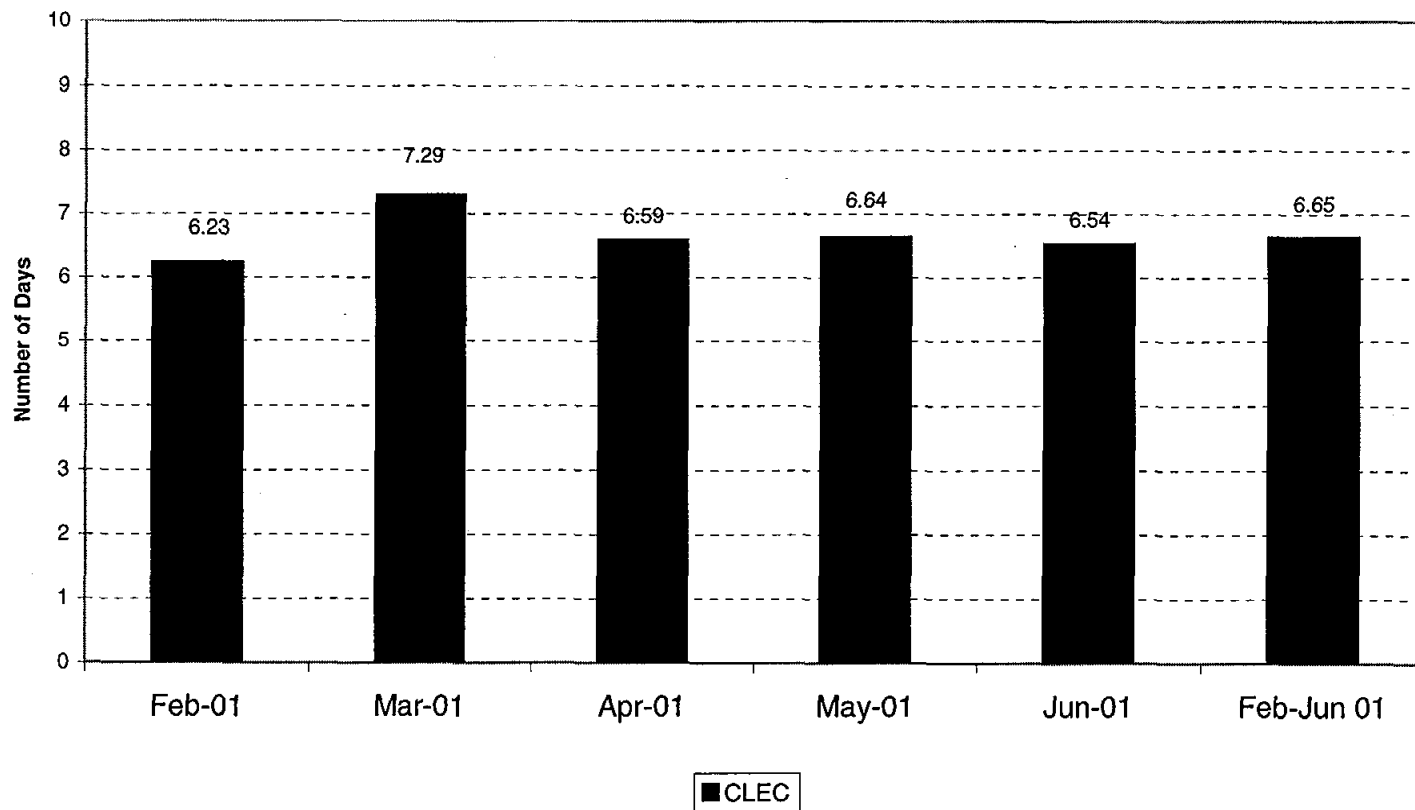
**Pennsylvania - UNE POTS**  
**Provisioning - % On Time Performance- Hot Cuts - (PR-9-01)**  
**Feb - Jun 01**



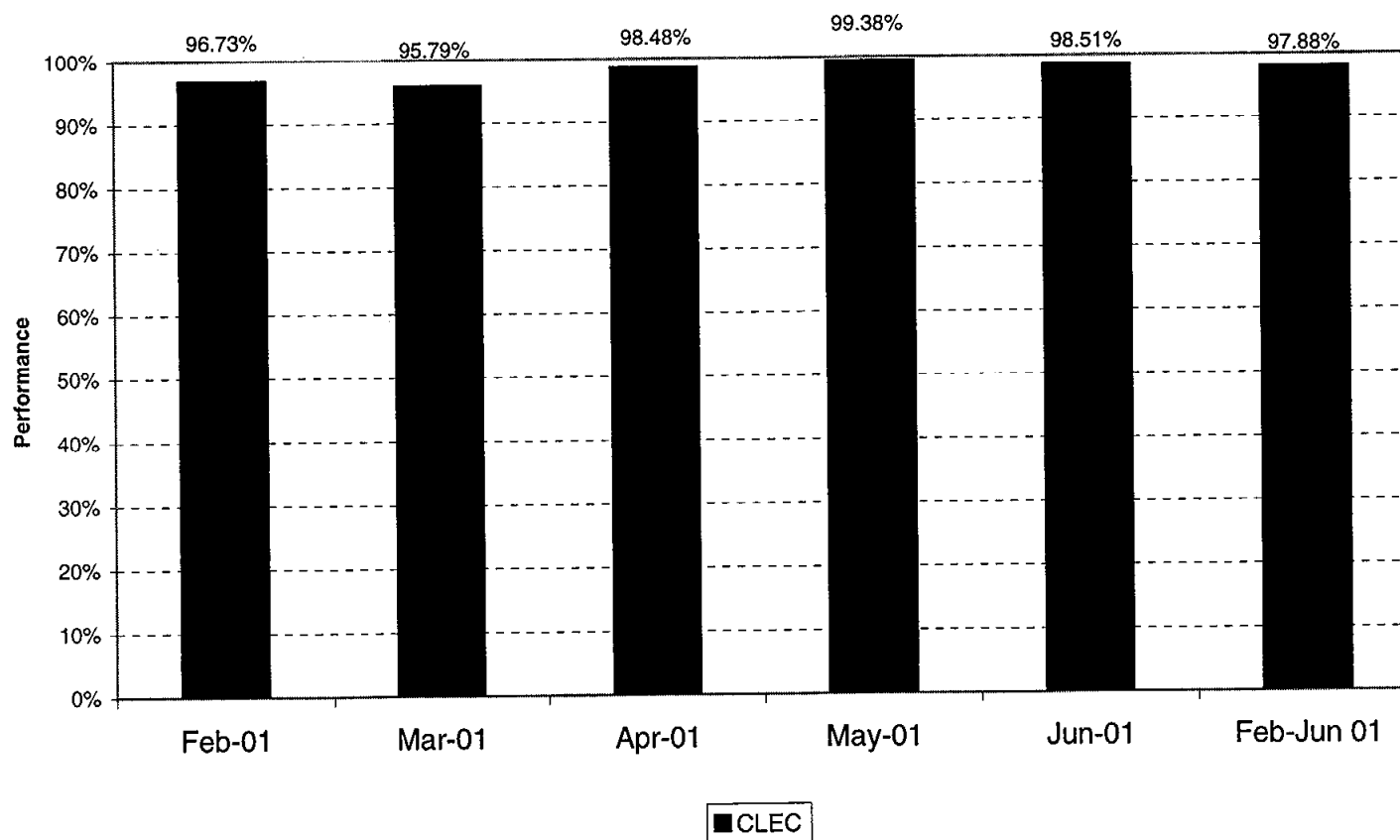
**Pennsylvania - UNE PROVISIONING**  
**Provisioning - % Installation Troubles Reported within 7 Days - Hot Cuts**  
**Feb - Jun 01**  
**(New York Business Rules)**



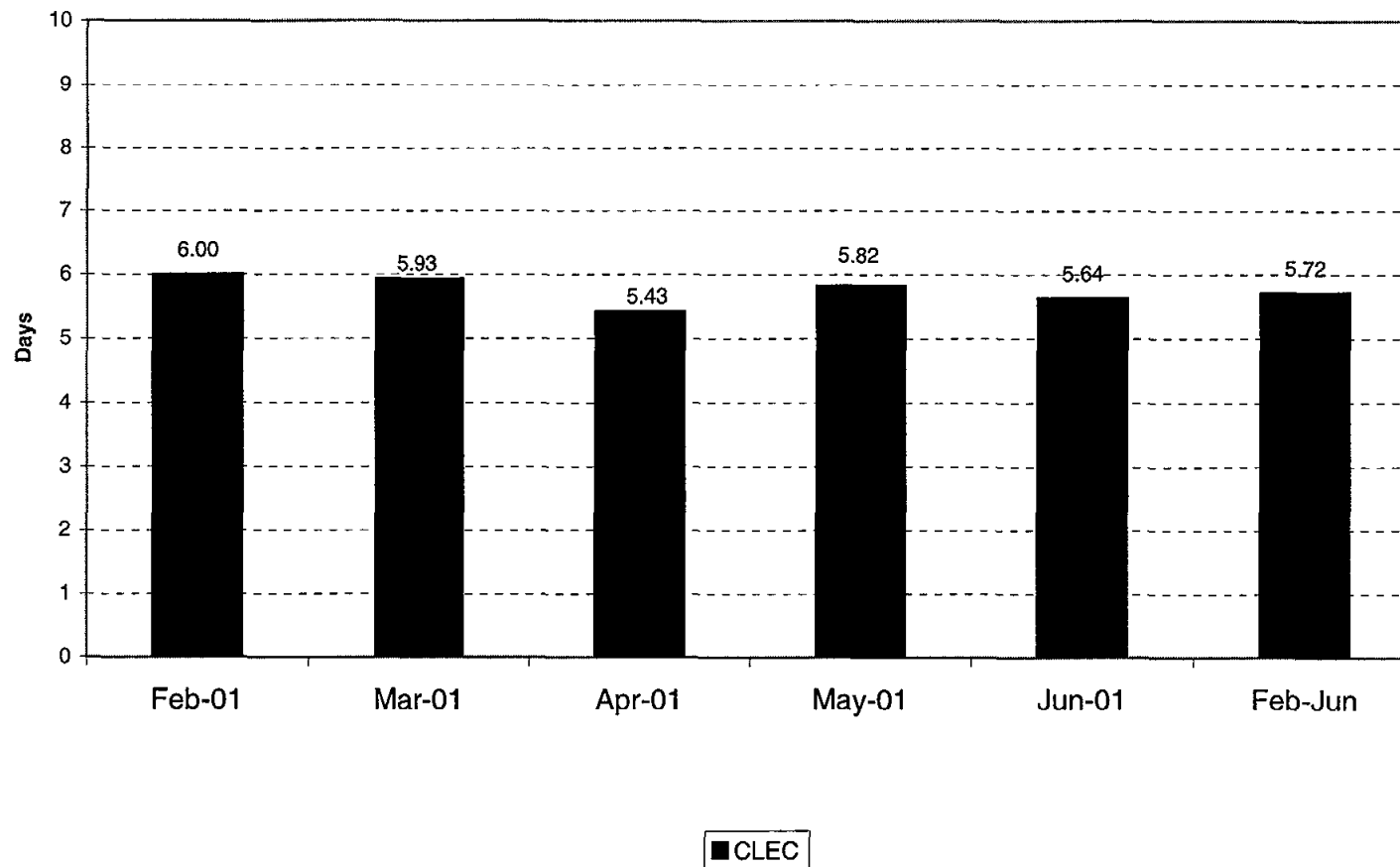
**Pennsylvania - UNE POTS**  
**Provisioning - Average Completed Interval - Hot Cuts - (PR-2-01)**  
**Feb - Jun 01**



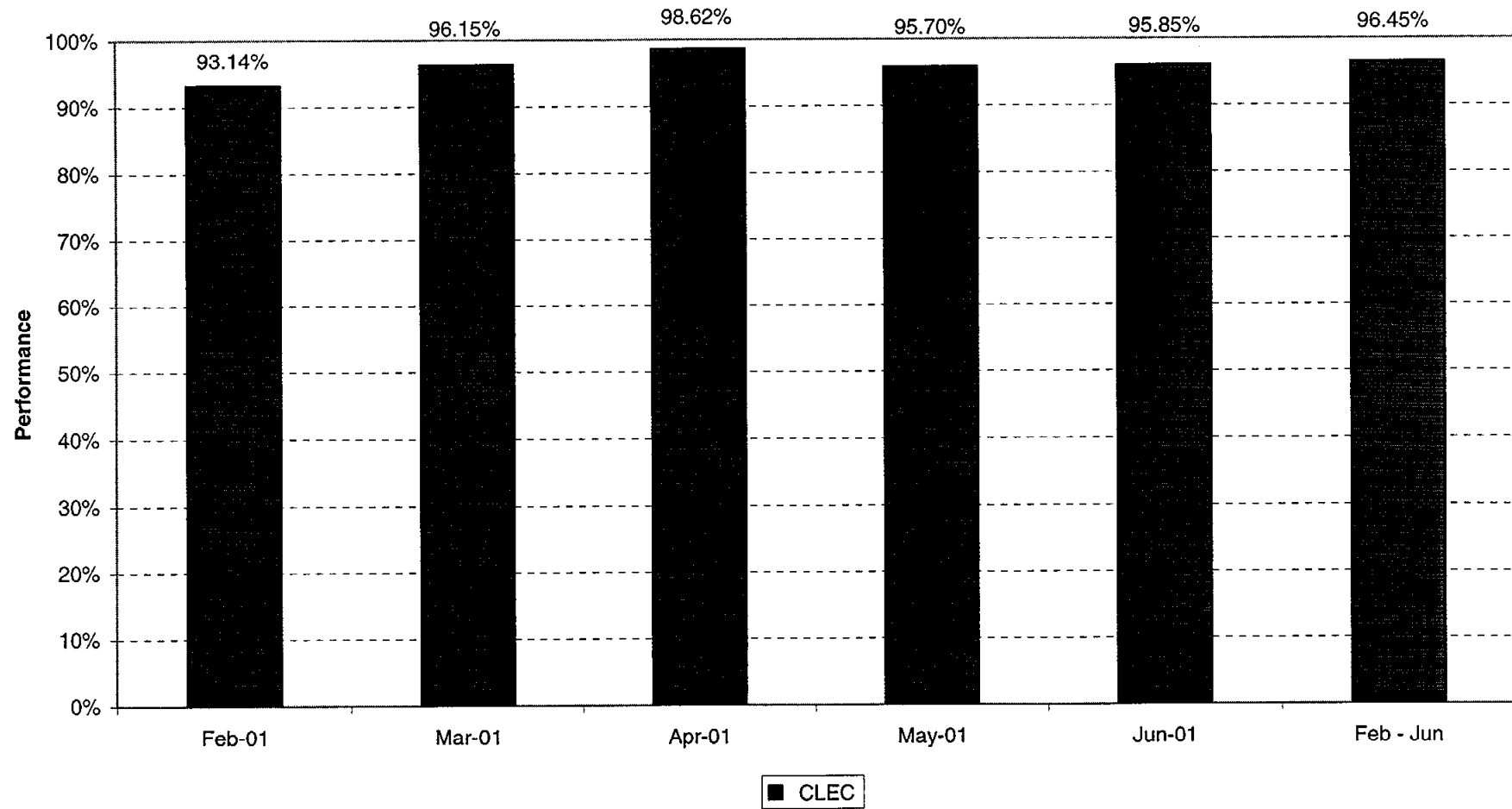
**Pennsylvania - DSL**  
**Provisioning - % Appointment Met - Verizon - Dispatch (Inverse Of PR-4-04)**  
**Feb - Jun 01**



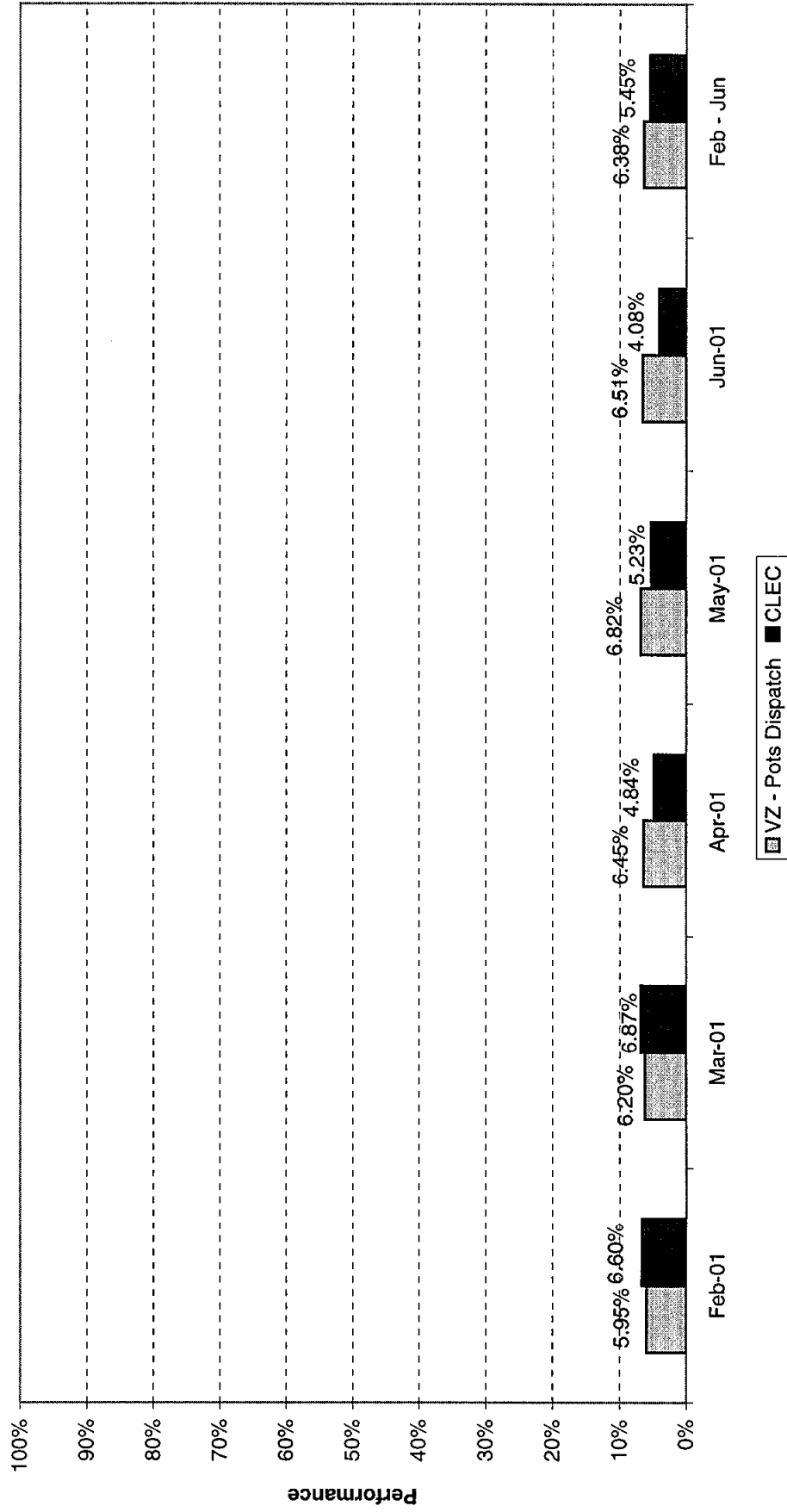
**Pennsylvania - DSL  
Provisioning - Average Interval Completed - Total Dispatch (PR-2-02)  
Feb - Jun 01**



**Pennsylvania - DSL**  
**Provisioning- % Completed within 6 Days (1-5 Lines - Total) (PR-3-10)**  
**Feb - June 01**

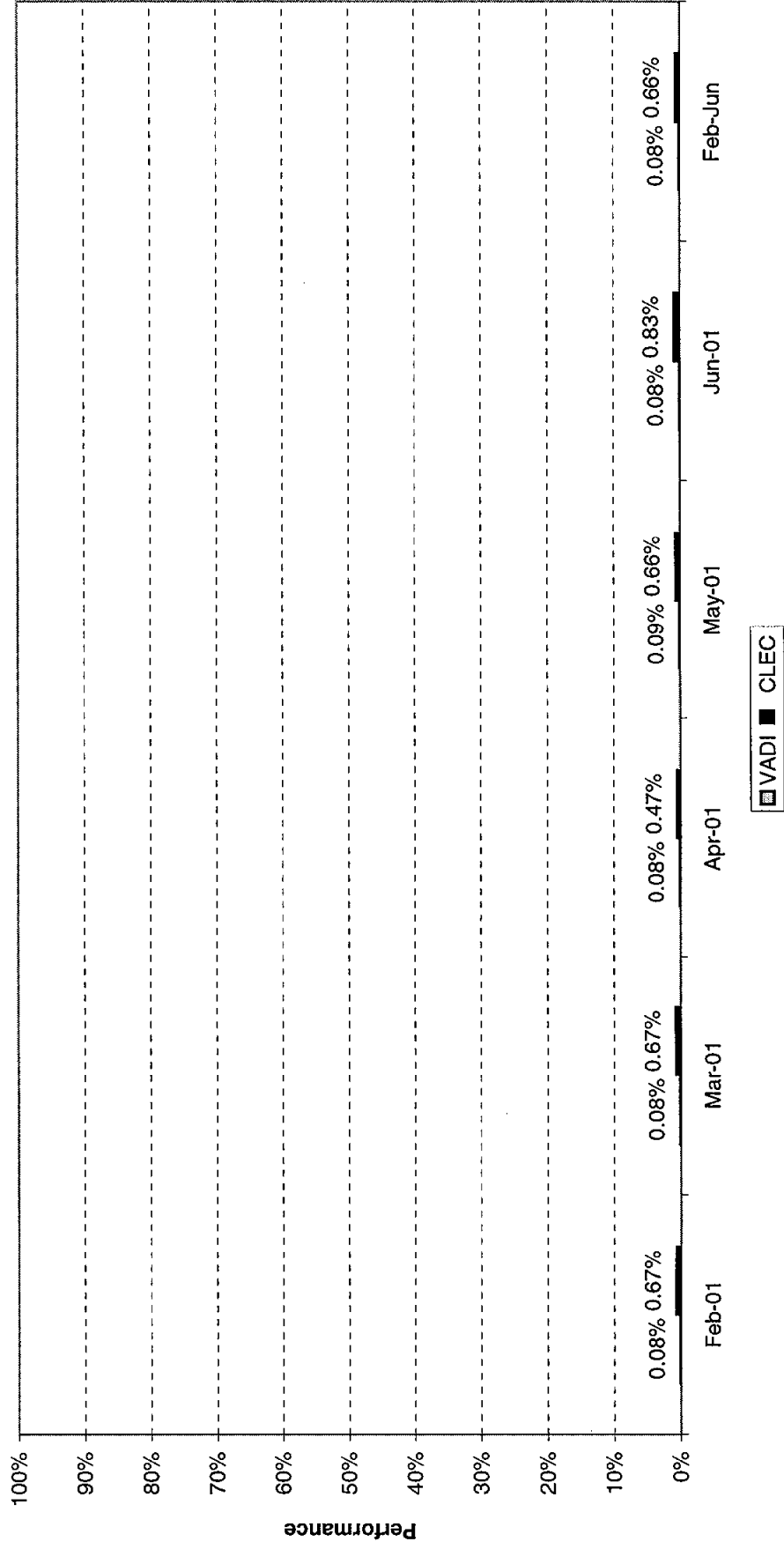


**Pennsylvania - DSL**  
**Provisioning - % Installation Troubles Reported within 30 Days (PR-6-01)**  
**Feb - Jun 01**  
**New Business Rules**

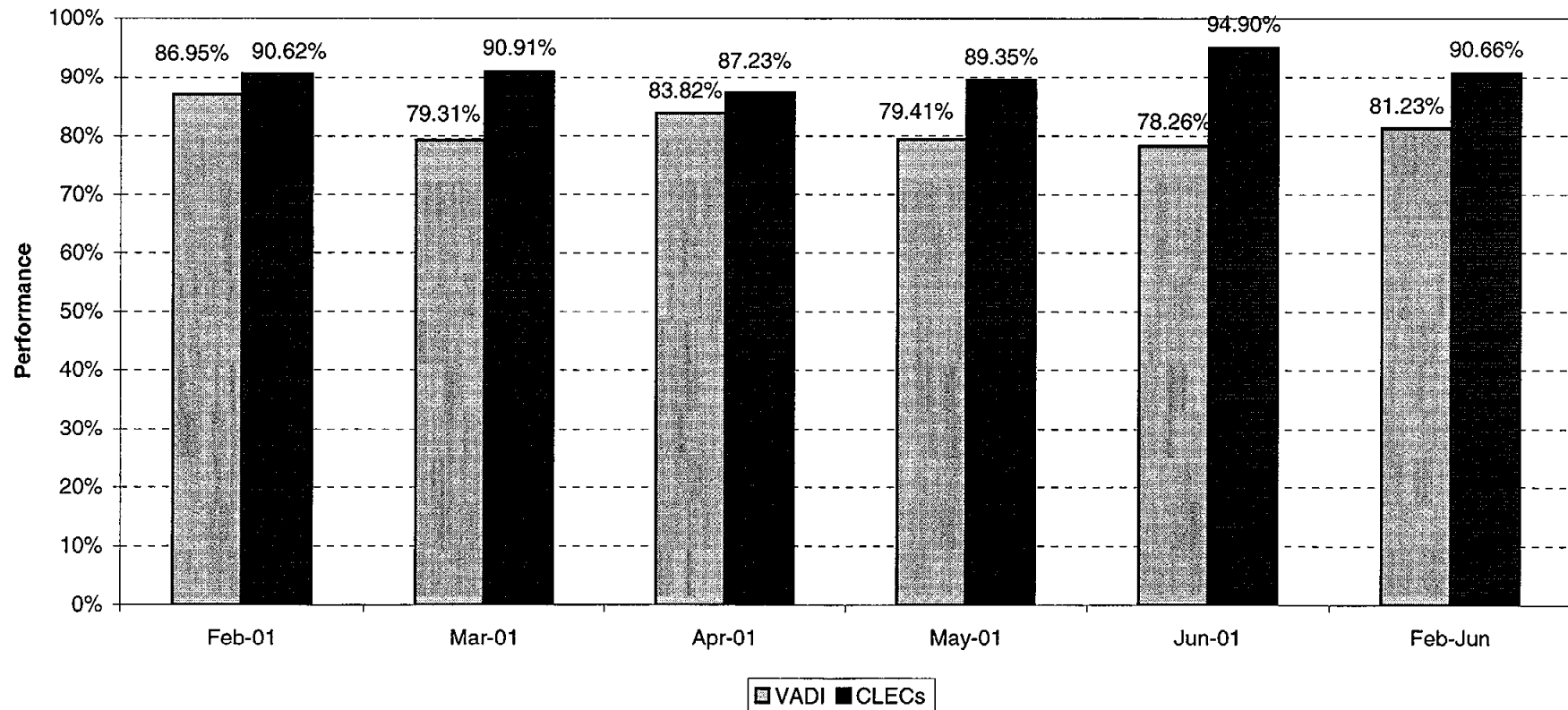




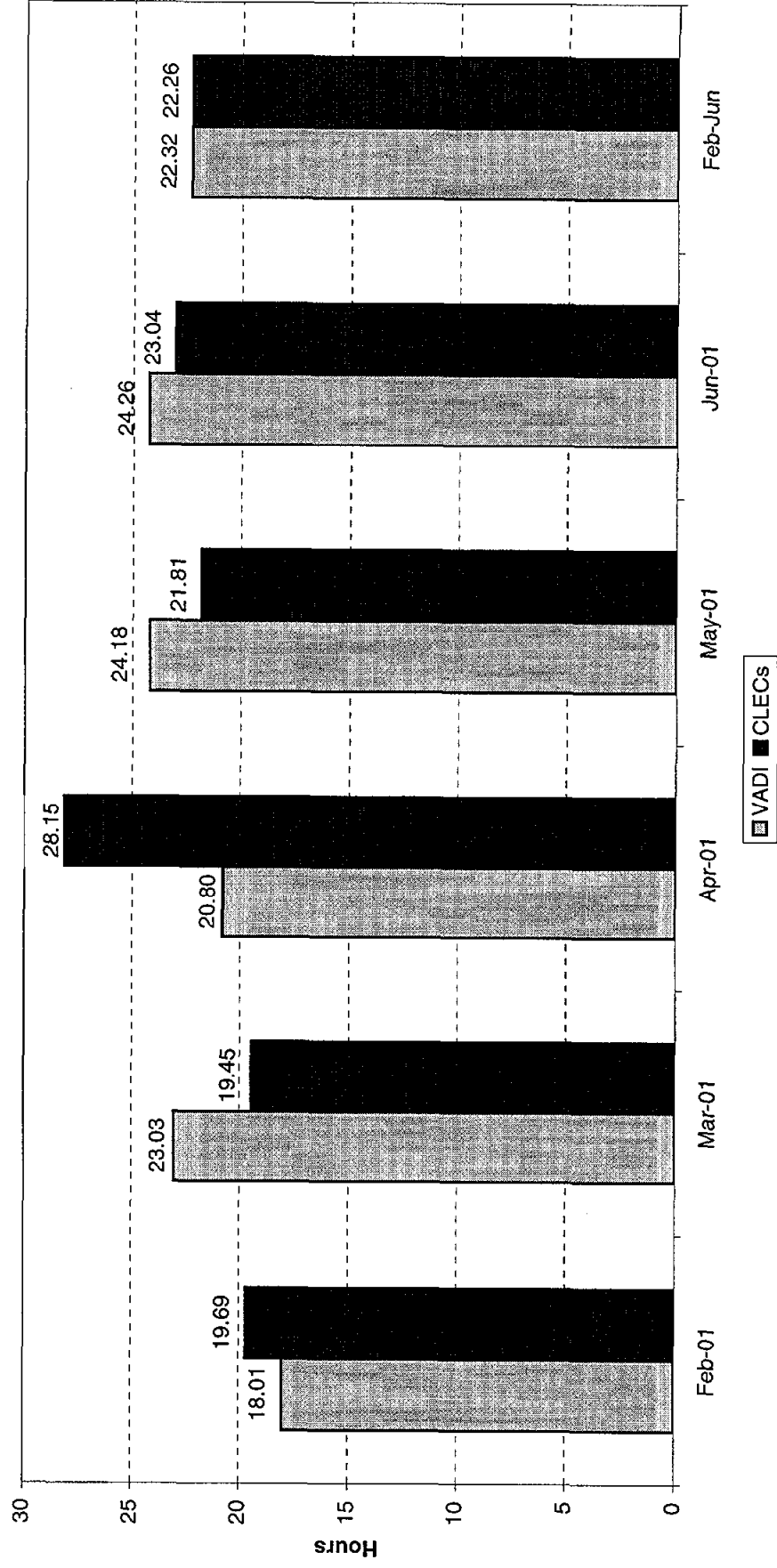
**Pennsylvania - DSL**  
**Maintenance - Network Trouble Report Rate - Total - Sum of MR-2-02 and MR-2-03**  
**Feb - Jun 01**



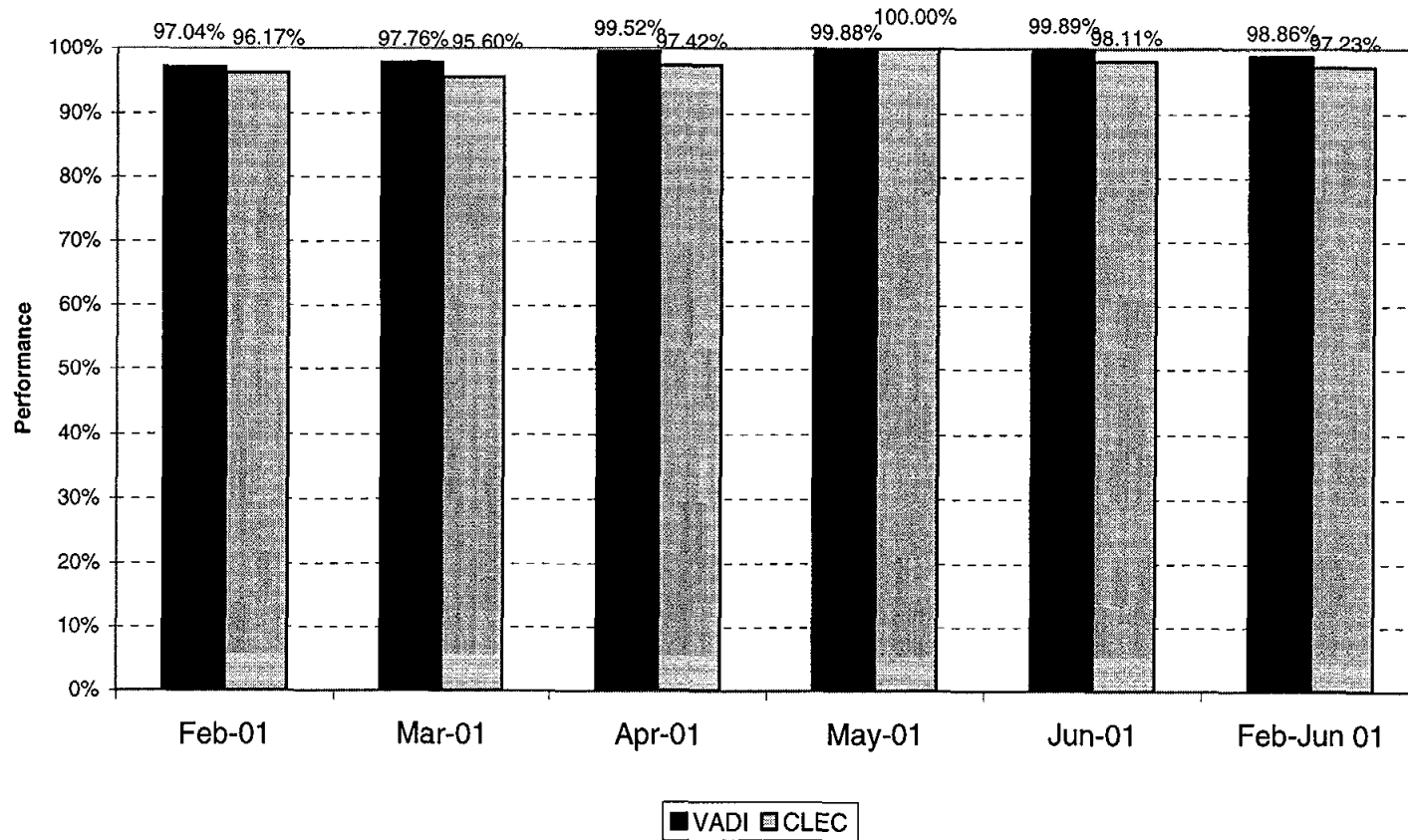
**Pennsylvania - DSL**  
**Maintenance - % Repair Appointments Met - Loop/Central Office**  
**(Inverse of MR-3-01/MR-3-02)**  
**Feb 01 - Jun 01**



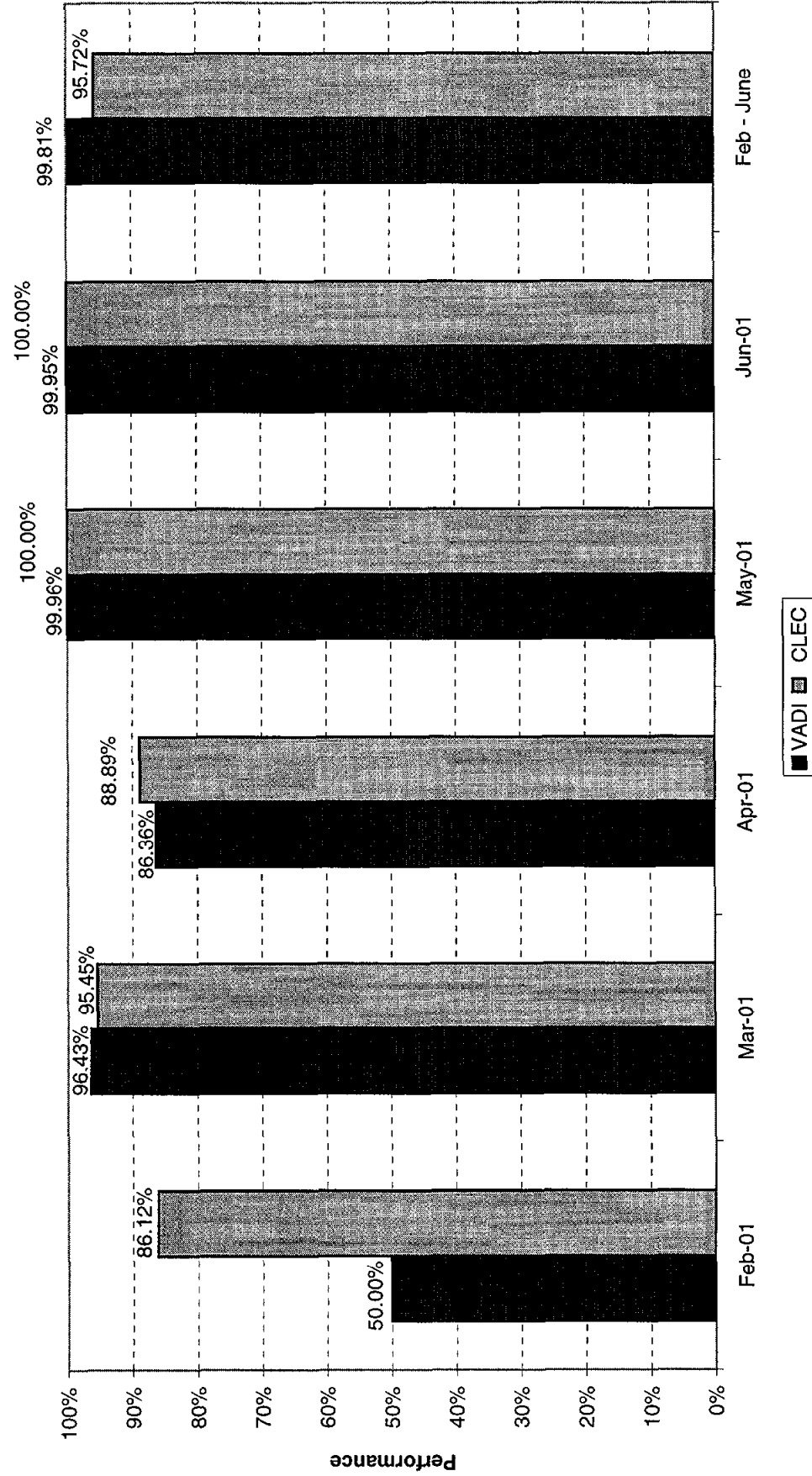
**Pennsylvania - DSL**  
**Maintenance - Mean Time to Repair - Loop and Central Office (MR-4-02 and MR4-03)**  
**Feb - Jun 01**



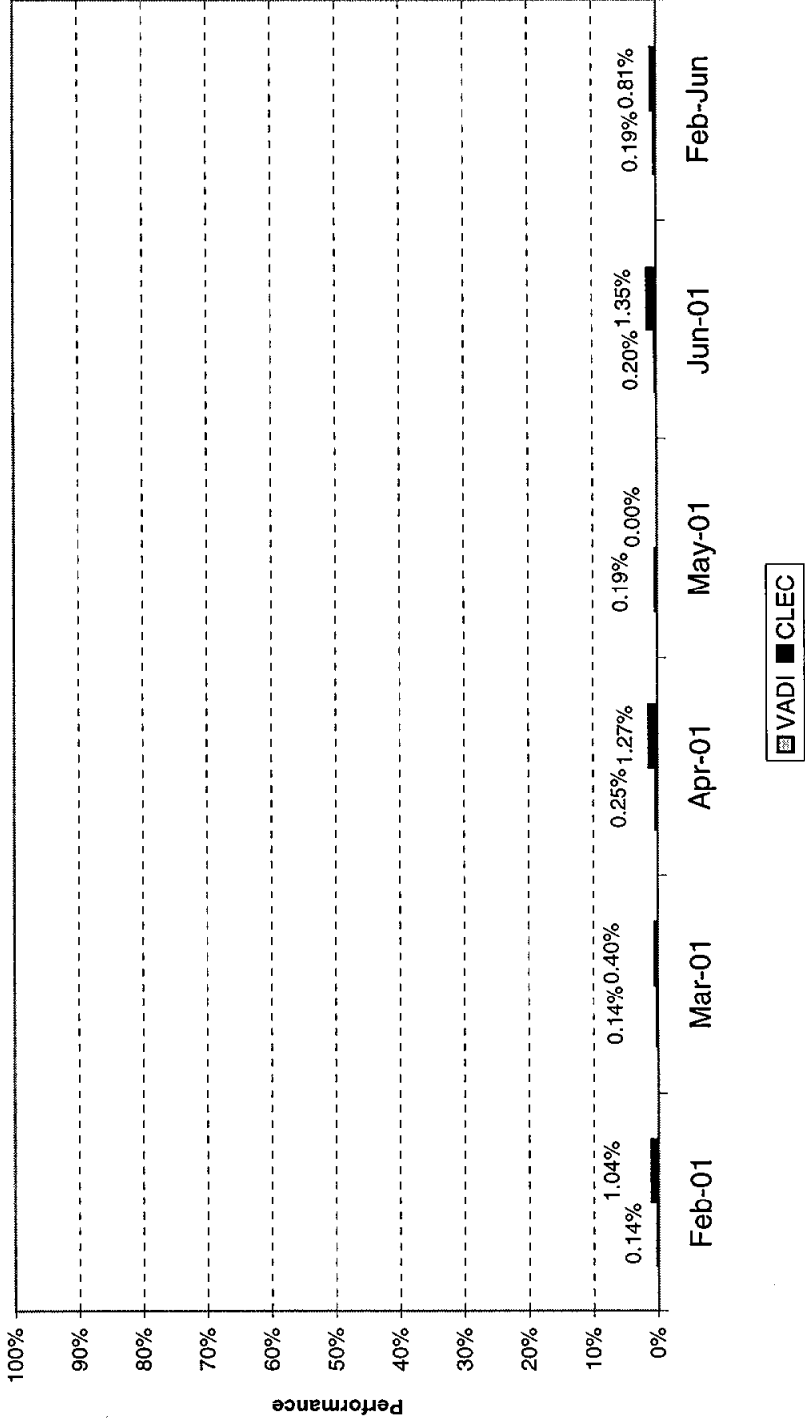
**Pennsylvania - Line Sharing**  
**Provisioning - % Appointments Met - Verizon - No Dispatch (Inverse of PR-4-05)**  
**Feb - Jun 01**



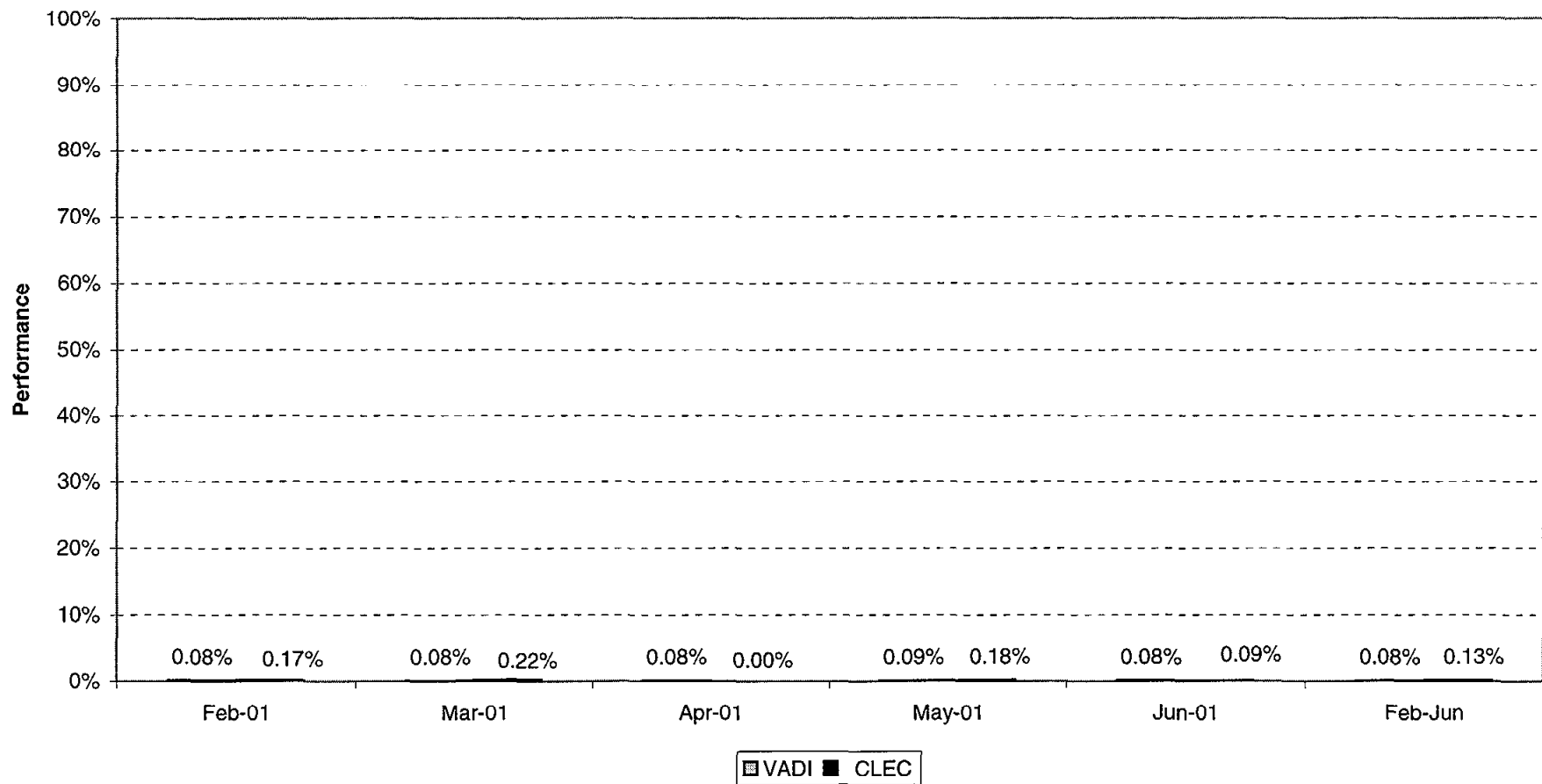
**Pennsylvania - Line Sharing**  
**Provisioning - % Completed within 3 Days (1-5 Lines - No Dispatch) (PR-3-03)**  
**Feb - June 01**



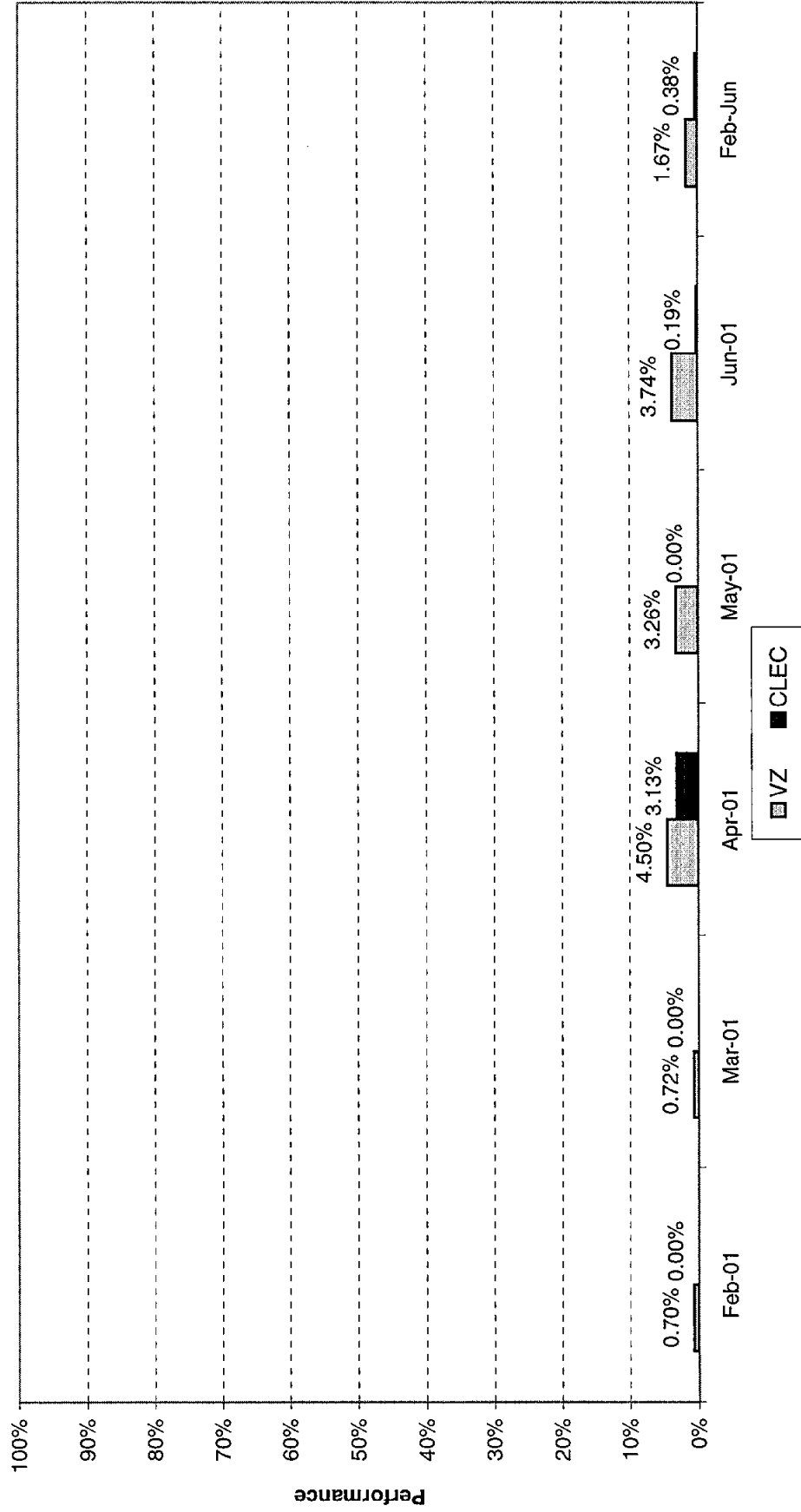
**Pennsylvania - Line Sharing**  
**Provisioning - % Installation Troubles Reported within 30 Days (PR-6-01)**  
**Feb - Jun 01**



**Pennsylvania - Line Sharing**  
**Maintenance - Network Trouble Report Rate - Total - Sum of MR-2-02 and MR-2-03**  
**Feb - Jun 01**

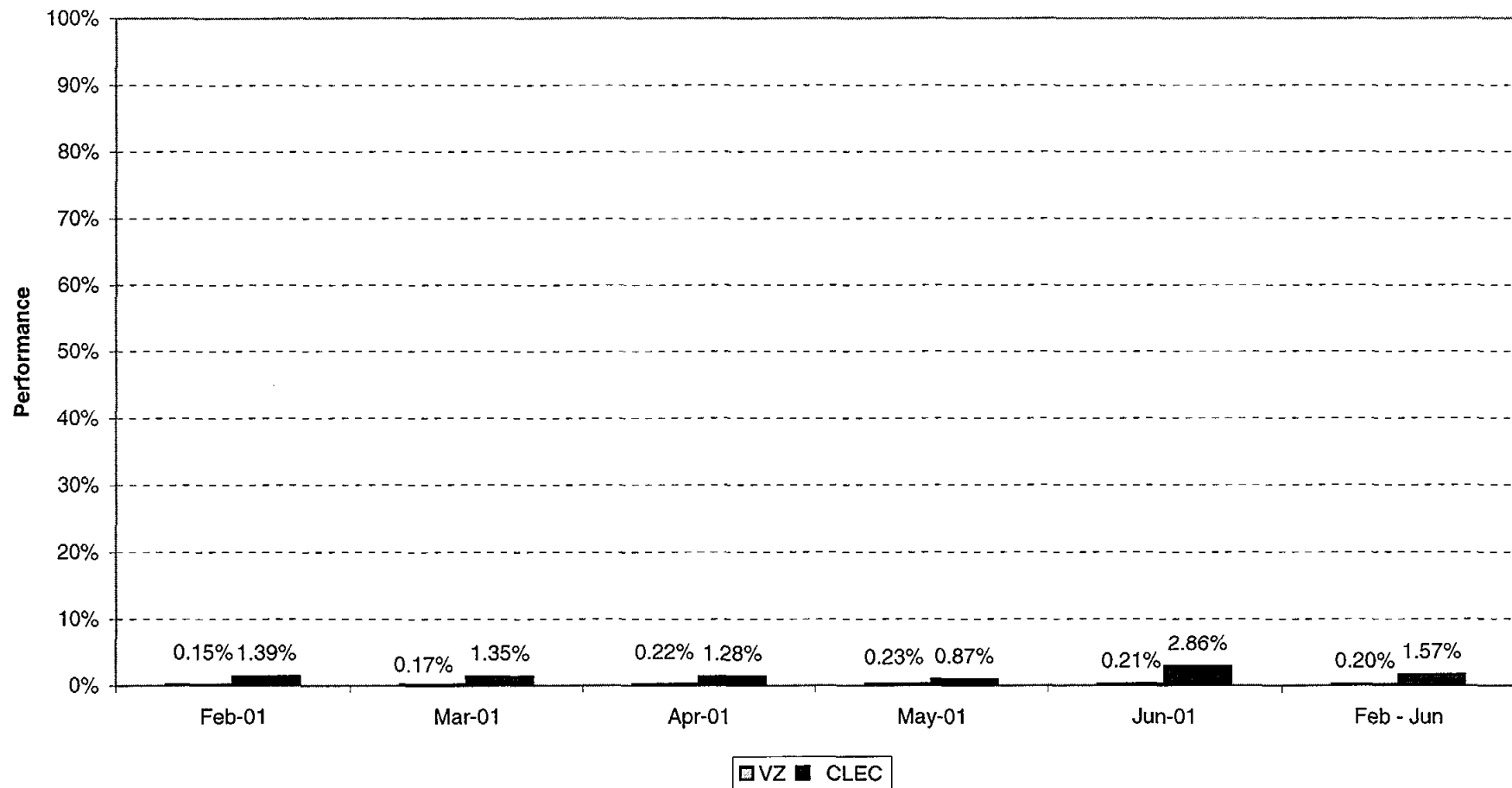


Pennsylvania - UNE  
 Provisioning - % Installation Troubles Reported within 30 Days -  
 Special Services - (PR-6-01)  
 Feb - Jun 01

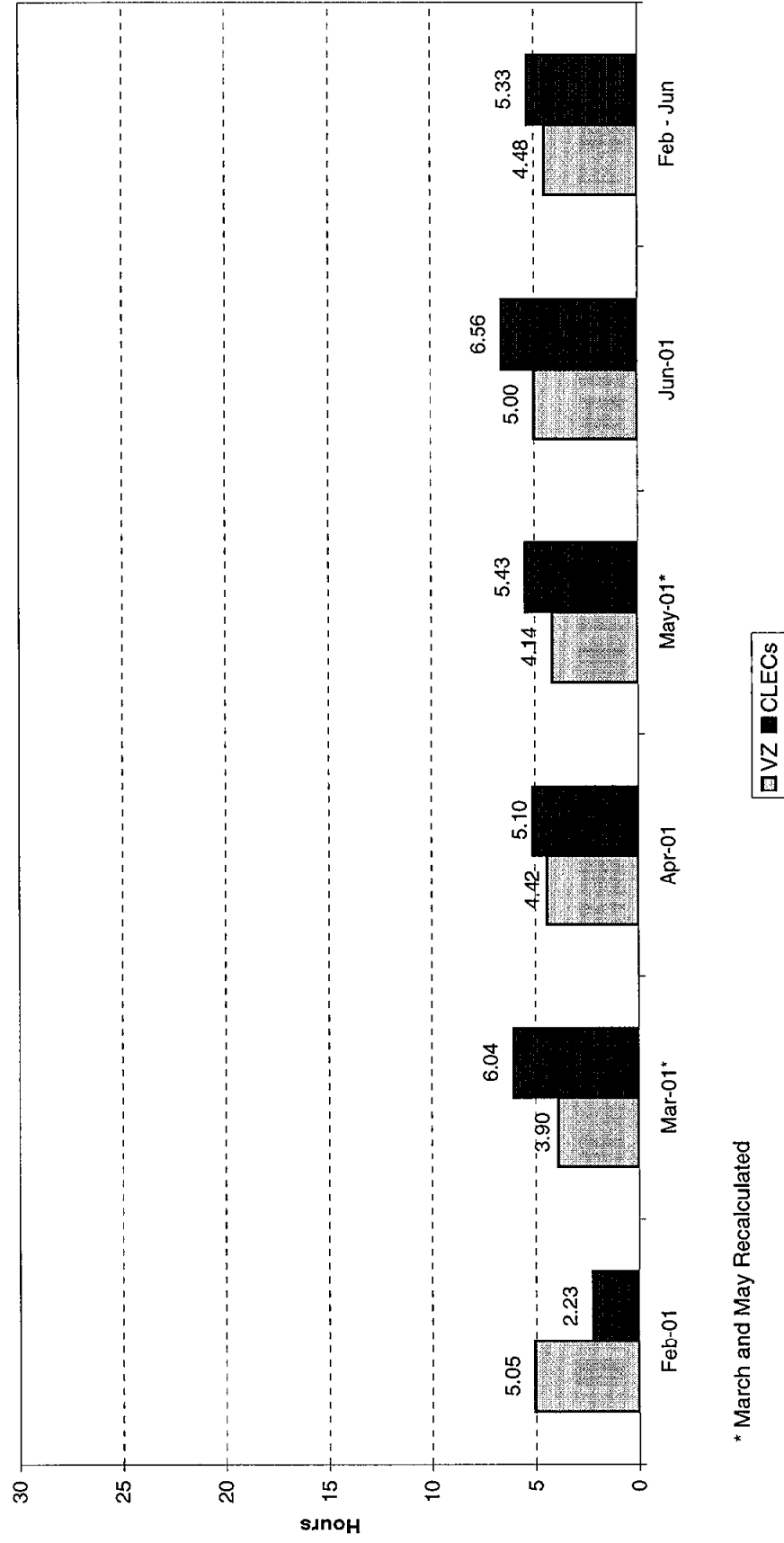




**Pennsylvania - UNE Special Services  
Maintenance - Network Trouble Report Rate (MR 2-01)  
Feb - Jun 01**



**Pennsylvania - UNE Special Services**  
**Maintenance - Mean Time to Repair - Total (MR-4-01)**  
**Feb - Jun 01**



\* March and May Recalculated



Pennsylvania Public Utilities Commission  
Performance Assurance Plan  
for  
Verizon Pennsylvania

*July 26, 2001*

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## **Procedural History of the Performance Assurance Plan**

- Oct., 1998: Chairman Quain initiates collaborative addressing performance measurements and remedies.
- Mar. 10, 1999: Eight Pennsylvania CLECs file Joint Petition requesting on-the-record proceedings for Performance Measures, Standards, and Remedies.
- Apr. 30, 1999: Pennsylvania PUC grants Joint Petition and initiates an on-the-record proceeding before an Administrative Law Judge.
- May, 1999: Verizon and CLECs file proposals and counter-proposals for performance measurements and performance remedy plans.
- Jun. 17-18, 1999: Hearings before ALJ.
- Aug. 12, 1999: Recommended Decision of ALJ.
- Dec. 31, 1999: Opinion and Order of the Pennsylvania PUC adopting a performance remedy plan that differs from those proposed and the ALJ's recommendation.



## Performance Assurance Plan Proposals

- Verizon
  - Size of payment should depend on four factors: (1) degree by which the standard is missed; (2) number of times standard is missed; (3) relative importance of standard to CLECs; (4) total number of standards missed
  - Cap on payments equal to 30% of Verizon billed wholesale revenues.
- AT&T
  - TIER I - Payments to specific CLECs of \$2,500 to \$25,000 per failure, per month, depending on the magnitude and frequency of the failure.
  - TIER II - Payments to an Industry Fund based on level of failures for aggregate CLEC data.
- WorldCom
  - TIER I - Payments to specific CLECs for missed benchmark standards.
  - TIER II - Payments to specific CLECs increase with the frequency and magnitude of the missed benchmark standards.
  - TIER III - Payments, based on overall service failures to the CLEC industry, to fund independent audits of Verizon's performance.



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## Administrative Law Judge's Recommended Decision

ALJ found significant flaws with every proposal. The ALJ specifically viewed Verizon's plan as too complicated.

### ALJ's Plan

- CLEC Specific Incentive Payments
  - Return 50% to 100% of fees to CLEC for failure to meet each benchmark, depending on magnitude of failure.
  - "Liquidated damages" ranging from \$2,500 to \$25,000 for consecutive monthly failures.
- Payments per access line to the Universal Service Fund for failures based on aggregate CLEC data.
- Remedy amounts to track inflation and Gross Domestic Product index.



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## **Pennsylvania PUC: Proper Attributes for Performance Assurance Plans**

- The “[g]oal is to properly measure performance and, where necessary, to promote that performance.”
- First and foremost, Performance Assurance Plan should be about improving industry-wide service, “this matter should not be about penalties. It should be about performance.”
- “This proceeding and its outcome is not an opportunity for the CLECs to wring dollars from [Verizon].”
- Remedies should flow directly to the affected parties, “if one does not get a service, one should not have to pay.”



## **Performance Assurance Plan Developed by Pennsylvania PUC**

- Tier I: If a CLEC does not receive service, then Verizon must return the CLEC's actual out-of-pocket payments.
- Tier II: Verizon must pay CLEC-specific "liquidated damages" for failures on performance measurements in consecutive months:
  - \$2,000 per measurement, per CLEC, for measurements missed for two months
  - \$4,000 per measurement, per CLEC, for measurements missed for three months
  - CLECs can petition the PUC to impose up to \$25,000 per measurement, per CLEC, for measurements missed for four or more months
  - For measurements missed for three or more months, Verizon must file with the PUC an explanation of the problem and the steps taken to correct it.
- CLECs receive all payments; there is no "general" fund.





## Further Proceedings Before the Pennsylvania PUC – Part I

- Jan. 31, 2000: Verizon files a Performance Assurance Plan pursuant to the PUC's December 31, 1999 Order
- Feb.-Apr. 2000: AT&T and MCI WorldCom file exceptions before the PUC, claiming that the Plan does not comply with the Order
- Sept. 7, 2000: The PUC issues an order rejecting aspects of Verizon's filed Plan as inconsistent with its Order. In particular, the PUC ordered Verizon to calculate performance remedies "on the basis of CLEC-specific, service-specific, and state-specific measurements," *i.e.*, at a fully disaggregated "sub-sub-measurement" level.
  - Commission "emphasize[s]," however, that its goal is "not to penalize but to provide incentives for [Verizon] to comply with the performance measures and standards."



## Further Proceedings Before the Pennsylvania PUC – Part II

- Oct. 16, 2000: The PUC rules on Verizon's motion for reconsideration of the September 7, 2000 Order, which AT&T opposed, holding that "only *reporting* should be at the fully disaggregated level and that *remedies* should be paid at the metric and sub-metric [level]," which provides "sufficient incentive for performance."
  - Commission also reaffirms that "a sample size of less than ten (10) does not constitute a statistically valid measurement" and states that there is "no reason for self-executing remedies to attach to any metric or sub-metric if there were less than ten (10) observations." The Commission confirms that reporting of performance is required regardless of sample size.
- Nov. 14, 2000: The PUC denies Verizon's request to remove performance remedies for three sub-measurements (MR-2-05, MR-3-03, OD-2) and to have them reported for diagnostic purposes only.



## **Further Proceedings Before the Pennsylvania PUC – Part III**

- Nov. 20, 2000: The PUC rules on AT&T's motion for reconsideration of the October 16, 2000 Order. The PUC rejects AT&T's contentions that the Commission impermissibly modified its December 31, 1999 Order and that sample sizes of fewer than 10 should be included in the Plan for remedy purposes.
- Feb. 22, 2001: The PUC approves a stipulation between Verizon, AT&T, MCI WorldCom, Covad, Rhythms, and others that incorporates into the Pennsylvania performance measurements the DSL and line sharing measurements adopted in New York.
  - Once reporting of those measurements is automated, remedy payments in the Plan will apply. Verizon has completed the automation as of the April 2001 data month.



## Further Proceedings Before the Pennsylvania PUC – Part IV

- Apr. 11, 2001: As part of its functional separation proceeding, the PUC increases the amount of the Tier II remedy payments:
  - \$3,000 per measurement, per CLEC, for measurements missed for two months
  - \$5,000 per measurement, per CLEC, for measurements missed for three months
- The additional \$1,000 “shall be remitted to the Commission, for the purpose of contracting with an independent consultant to train and to assist Commission staff in the analysis of metric reports.”
- The PUC also ordered “that a proceeding be convened to determine whether any further adjustment of these performance measures penalties may be necessary.” That proceeding is to be completed by September 30, 2001.



## **Further Proceedings Before the Pennsylvania PUC – Part V**

- June 6, 2001 - Secretarial letter - condition on recommendation for 271:
  - Made self-executing the \$25,000 per metrics missed for four or more consecutive months
  - Effective from July until December 2001 or with new PAP plan (whichever comes first) added 2 special billing metrics for CLECs that select the BOS electronic bill format as their bill of record. Remedies for each of these will be \$50,000 for the first month miss, \$75,000 for 2 consecutive months miss and \$100,000 for 3 consecutive months missed.



## **Further Proceedings Before the Pennsylvania PUC – Part VI**

- Performance Measures Remedies docket number M-00011468:
  - July 16, 2001 - Parties filed proposals on metrics. Verizon filed NY c2c guidelines modified to reflect differences in PA. Added proposal for a metric for Directory Listing Accuracy and a SOP to BCN metric.
  - July 25, 2001 - Parties filed PAP proposals.
  - August 6, 2001 - Comments Due
  - August 14 - 16, 2001 - Hearings
  - September 30, 2001 - ALJ recommendation



## **PA PAP: Performance Measurement Categories**

The Carrier-to-Carrier (“C2C”) Guidelines contain eight categories of performance measurements:

- Pre-Ordering
- Ordering
- Provisioning
- Maintenance & Repair
- Network Performance
- Billing
- Operator Services and Database
- General



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## Verizon Pennsylvania - Performance Measurements

The C2C Guidelines require reporting of 46 measurements across the eight categories:

- The 46 measurements contain sub-measurements that capture performance related to particular products and services. There are a total of 163 sub-measurements, of which 110 have associated remedies in the Performance Assurance Plan. The others either were adopted by the PUC for diagnostic purposes only or are redundant of other sub-measurements.
- The 163 sub-measurements are further disaggregated by geographic region, mode of entry, and product category – totaling of almost 2,000 “sub-sub-measurements” per CLEC.
- The 110 sub-measurements with associated remedies are disaggregated into 1,490 “sub-sub-measurements.”

For remedy purposes, most sub-measurements are CLEC specific. For some, such as system response for Pre-Ordering and Maintenance, remedies are paid on an aggregate basis to all affected CLECs.





## **Verizon Pennsylvania: Performance Measurement Standards**

Measurements fall into three groups:

- Measurements with a reasonably analogous Verizon retail service have a “parity” standard. This compares Verizon’s performance for its own retail customers with Verizon’s wholesale performance for CLECs.
- Measurements without a reasonably analogous Verizon retail service have a benchmark standard against which performance is compared each month.
- The third group of measurements have neither a parity nor a benchmark standard, as they were established by the PUC only for diagnostic or informational purposes.



## **Verizon Pennsylvania: Determining Parity**

For measurements with a parity standard, Verizon will use statistical methodologies to determine if performance for the CLECs is equivalent to retail service.

- The modified Z-statistic and modified t-statistic are used to determine if parity is achieved for percent and mean (average) measurements, respectively, when both the Verizon and CLEC sample size are 30 or more.
- When either the Verizon or the CLEC sample size is between 10 and 29, a permutation test is used to measure performance, because these relatively small sample sizes may not be normally distributed.
- If the total sample size at the submeasurement level is less than 10, performance results are reported but not evaluated for parity.



## Verizon Pennsylvania: Percentages and Means

Measurements with parity standards are of two types

- Percentages or Counted Variables:

Examples include: % On-time, % Missed Appointment, % Repeat Reports

- Means (Averages) or Measured Variables

Examples include: Mean Time to Repair, Average Delay Days

The type of measurement determines which statistic to use in evaluating if parity exists between the retail and wholesale performance.



## Verizon Pennsylvania: Z-statistic and t-statistic

The Z-statistic and t-statistic take into consideration sample size, the difference between the measured performance, and, for the t-statistic, the standard deviation of the sample, to determine the level of confidence with which one can say the means or percentages are actually different and the apparent difference is not just a result of random variation.

The t-statistic and Z-statistic formulas for parity determination are shown below:

Means (Averages) or Measured Variables:	Percentages or Counted Variables:
$t = \frac{\bar{X}_{CLEC} - \bar{X}_{VZ}}{\sqrt{s_{VZ}^2 \left( \frac{1}{n_{CLEC}} + \frac{1}{n_{VZ}} \right)}}$	$Z = \frac{P_{CLEC} - P_{VZ}}{\sqrt{P_{VZ}(1 - P_{VZ}) \left( \frac{1}{n_{CLEC}} + \frac{1}{n_{VZ}} \right)}}$

Variables:

- X is defined as the average performance or mean of the sample
- s is defined as the standard deviation
- n is defined as the sample size
- P is defined as the proportion, for percentages 90% translates to a 0.90 proportion



## **Verizon Pennsylvania: 95% Confidence Level**

If the Z-statistic or t-statistic score is less than -1.645, Verizon will be deemed to have missed a parity standard.

- The Z-statistic or t-statistic for each submeasurement is compared with the standard each month using CLEC and analogous Verizon retail results.
- A score of -1.645 corresponds to a 95% confidence level that the wholesale and retail results are different.
- The 95% confidence level leaves a 5% probability that Verizon will be deemed to have missed the parity standard when, in fact, parity service is being provided to the CLEC.



## Verizon Pennsylvania: Permutation Test

For sub-measurements with parity standards and samples sizes between 10 and 29, a permutation test is used to determine if the parity standard has been met when the reported CLEC performance is worse than the reported Verizon retail performance.

- This test better accommodates situations with relatively small sample sizes, as the normal distribution assumption is unlikely to hold.
- As with the Z-statistic and t-statistic, a 95% confidence interval is used.



## **Verizon Pennsylvania: Benchmark Standard**

For sub-measurements with a benchmark standard, Verizon will not use statistical methodologies to determine if performance for the CLECs is equivalent to retail service. Instead, if Verizon's performance on these sub-measurements is below the standard, it is deemed to have missed that standard.

- Therefore, performance of 94.9 percent on a submeasurement with a 95 percent benchmark – or performance of 99.49 percent on a submeasurement with a 99.5 percent benchmark – is scored as a “miss.”
- If the total sample size at the submeasurement level is less than 10, performance results are reported but not evaluated against the benchmark.



## Verizon Pennsylvania: Weighted Average

Remedies are determined by performance results at the submeasurement level. For sub-measurements that have disaggregated components for various geographies, modes of entry, products, etc., performance is “rolled up” to the submeasurement level.

- CLEC results at the submeasurement level are determined by calculating a weighted average of the CLEC’s disaggregated results. The weighting is based on the corresponding number of CLEC observations for each of the disaggregated components.
- Verizon’s results at the submeasurement level are also determined by a weighted average, but is based on the number of *CLEC* observations for each of the disaggregated components, rather than on the number of *retail* observations. This provides an “apples-to-apples” comparison, by projecting what Verizon’s performance would have been if it had a product and geographic mix similar to that of the CLEC.





## “Rolling Up” Performance Results for Parity Calculations – Part I

			Geography	Actual Performance		Number of Observations	
				VZ-PA	CLEC	VZ-PA	CLEC
PR-6-02	% Installation Troubles Rept. W/in 7 Days		State Aggregate	???	???	195483	1185
			Philadelphia	4.35	4.72	39133	106
			Eastern South	3.23	1.46	25469	342
			Eastern North	3.67	2.68	37823	447
			Central	2.56	0.00	44771	284
			Western	2.52	2.67	48287	6
			Philadelphia	4.35		39133	
			Eastern South	3.23		25469	
			Eastern North	3.67		37823	
			Central	2.56		44771	
			Western	2.52		48287	
			Philadelphia	4.35		39133	
			Eastern South	3.23		25469	
			Eastern North	3.67		37823	
			Central	2.56		44771	
			Western	2.52		48287	
			Philadelphia	4.35		39133	
			Eastern South	3.23		25469	
			Eastern North	3.67		37823	
			Central	2.56		44771	
			Western	2.52		48287	

Note that the the same retail product is used as the retail analog for Resale POTS, UNE POTS-Loop, and UNE POTS-Platform.



## “Rolling Up” Performance Results for Parity Calculations – Part II

		Geography	Actual Performance		Number of Observations	
			VZ-PA	CLEC	VZ-PA	CLEC
PR-6-02	% Installation Troubles Rept. W/in 7 Days	State Aggregate	3.33	1.87	195483	1185
	Resale POTS	Philadelphia	4.35	4.72	39133	106
	Resale POTS	Eastern South	3.23	1.46	25469	342
	Resale POTS	Eastern North	3.67	2.68	37823	447
	Resale POTS	Central	2.56	0.00	44771	284
	Resale POTS	Western	2.52	2.67	48287	6

1. Obtain actual performance and observation data for Verizon and the CLEC
2. Calculate a weighted Verizon performance based proportionately on the CLEC's volumes across products and regions. For example:  $[(106/1185) \times 4.35] + [(342/1185) \times 3.23] + [(447/1185) \times 3.67] + [(284/1185) \times 2.56] + [(6/1185) \times 2.52] = 3.33$
3. Calculate a weighted CLEC performance based proportionately on the CLEC's volumes across products and regions. For example:  $[(106/1185) \times 4.72] + [(342/1185) \times 1.46] + [(447/1185) \times 2.68] + [(284/1185) \times 0.00] + [(6/1185) \times 2.67] = 1.87$
4. Use the calculated Verizon performance of 3.33, the calculated CLEC performance of 1.87, the overall Verizon standard deviation, and the actual volumes to calculate the sampling error and Z-score per the formulas in the plan
5. If the number of CLEC observations at the State Aggregate level is less than 10, then performance will be reported but not evaluated for remedy payments.



## Verizon's July 25, 2001 PAP Proposal

- New PA PAP proposed an alternative PAP for Pennsylvania.
- NY(pa) PAP proposed that if the Commission will only consider NY PAP that certain modifications that are absolutely essential to ensuring that this PAP is accurate and that it is fair to all interested parties. However, the NY(pa) PAP should be adopted only in the event that the Commission rejects the New PA PAP and any other proposals it receives that are not based on the New York PAP.

**MR 5-01 % REPEATED REPORTS -- POTS Loops  
ROOT CAUSE ANALYSIS  
NEW HAMPSHIRE**

	March	April	May	Mar - May 2001 Average
Retail % Repeated Reports	13.38%	14.66%	14.53%	14.16%
UNE POTS Loop % Repeated Reports	20.17%	22.81%	19.73%	20.79%
# UNE POTS Loop Network Troubles	119	114	147	380
# UNE POTS Repeated Reports	24	26	29	79
<u>Root Cause</u>				
Misdirected by CLEC	11	8	5	24
% of Total Repeaters	46%	31%	17%	30%
MR 5-01 Adjusted for Misdirects	10.92%	15.79%	16.33%	14.47%
Delta from Reported Result	9.25%	7.02%	3.40%	6.32%
Delta -- Adjusted to Retail	-2.46%	1.13%	1.80%	0.31%